

10/532646

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference | FOR FURTHER see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | | | | |
|--|---|--|--|--|--|
| AMS . P52408WO International application No. | International filing date (day/month/year) | (Earliest) Priority Date (day/month/year) | | | |
| mierianona approaco. | | | | | |
| PCT/EP 03/50836 | 14/11/2003 | 15/11/2002 | | | |
| Applicant | | | | | |
| WESTERNGECO SEISMIC HOLDI | NGS LIMITED | | | | |
| according to Article 18. A copy is being to | | nority and is transmitted to the applicant | | | |
| | s of a total ofs heets. y a copy of each prior art document cited in this | report. | | | |
| Basis of the report | | | | | |
| a. With regard to the language, the language in which it was filed, un | e international search was carried out on the bas lless otherwise indicated under this item. | sis of the international application in the | | | |
| Authority (Rule 23.1(b)). | was carried out on the basis of a translation of the | | | | |
| was carried out on the basis of th | ne sequence listing : | ternational application, the international search | | | |
| 1 | onal application in written form. ernational application in computer readable forn | · n | | | |
| | o this Authority in written form. | in. | | | |
| · · · | o this Authority in computer readble form. | | | | |
| the statement that the su | bsequently furnished written sequence listing d | oes not go beyond the disclosure in the | | | |
| | as filed has been furnished. | s identical to the written sequence listing has been | | | |
| furnished | omation recorded in computer readable form is | substitucal to the written sequence using has been | | | |
| 2. Certain claims were fou | ınd unsearchable (See Box I). | | | | |
| 3. Unity of invention is lac | king (see Box II). | | | | |
| 4. With regard to the title, | | | | | |
| the text is approved as su | ubmitted by the applicant. | | | | |
| | shed by this Authority to read as follows: | | | | |
| | | • | | | |
| 5. With regard to the abstract, | | | | | |
| the text has been establis | ubmitted by the applicant. shed, according to Rule 38.2(b), by this Authorit e date of mailing of this international search rep | y as it appears in Box III. The applicant may, ort, submit comments to this Authority. | | | |
| 6. The figure of the drawings to be public | | 2A. 2B | | | |
| as suggested by the appl | | None of the figures. | | | |
| because the applicant fail | | <u> </u> | | | |
| <u> </u> | characterizes the invention. | | | | |

INTERNATIONAL SEARCH REPORT

International Application No Page P 03/50836

a. classification of subject IPC 7 G01V1/20

G01V1/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 G01V

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

| C. DOCUM | ENTS CONSIDERED TO BE RELEVANT | |
|------------|---|-----------------------|
| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | US 6 333 897 B1 (WARDEBERG JORN ET AL) 25 December 2001 (2001-12-25) column 1, line 35 -column 2, line 15; figure 3 | 1-31 |
| Ŷ | US 3 660 809 A (PEARSON RAYMOND H) 2 May 1972 (1972-05-02) column 2, line 43 -column 3, line 8; figures 3,4 | 1-31 |
| Y | US 4 725 990 A (ZIBILICH JR ANTHONY M) 16 February 1988 (1988-02-16) column 3, line 13 - line 50; figures 2,3 | 1-31 |
| Y | US 6 041 282 A (WARDEBERG JOERN ET AL) 21 March 2000 (2000-03-21) column 1, line 57 -column 2, line 6 | 1-31 |
| | | |

| X Further documents are listed in the continuation of box C. | X Patent family members are listed in annex. |
|---|--|
| Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory, underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family |
| Date of the actual completion of the international search 6 May 2004 | Date of mailing of the international search report 1 8. 05. 04 |
| Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | Authorized officer GORDANA NINKOVI C/MN |

1

INTERNATIONAL SEARCH REPORT

International Application No
PCTSP 03/50836

| | , | PV 9 03/30030 |
|------------|---|-----------------------|
| | ation) DOCUMENTS CO. RED TO BE RELEVANT | |
| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | US 6 021 091 A (GAISER JAMES E) 1 February 2000 (2000-02-01) column 3, line 16 - line 47; figure 2 | 1-31 |
| Α | US 4 491 939 A (CARPENTER ALLAN L) 1 January 1985 (1985-01-01) column 3, line 26 -column 4, line 2; figure 3 | 1-31 |
| Α | US 6 108 267 A (PEARCE RICHARD E) 22 August 2000 (2000-08-22) column 4, line 45 -column 5, line 27; figure 1A | 1-31 |
| Α . | US 4 821 241 A (BERGLUND CARL 0) 11 April 1989 (1989-04-11) column 3, line 62 -column 4, line 10; figure 2 | 1-31 |
| A | US 5 943 293 A (BRAHAM ROBERT M ET AL) 24 August 1999 (1999-08-24) column 3, line 28 -column 4, line 4; figures 1,2 | 1-31 |
| Α | US 6 188 646 B1 (ERATH LOUIS ET AL) 13 February 2001 (2001-02-13) column 2, line 57 -column 3, line 26; figure 1 | 1-31 |
| A | US 6 477 111 B1 (BITTLESTON SIMON HASTINGS ET AL) 5 November 2002 (2002-11-05) column 3, line 62 -column 4, line 36; figure 3A | 1-31 |
| | | |
| | | |
| | | |
| | | |
| | | |

1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
POSSEP 03/50836

| | tent document in search report | | Publication date | | Patent family member(s) | | Publication date | |
|----|-----------------------------------|----|------------------|--|---|-------------------------------------|--|----|
| US | 6333897 | B1 | 25-12-2001 | NO GB US | 982890 2338556 6510103 | A ,B | 20-12-1999 22-12-1999 21-01-2003 | |
| US | 3660809 | A | 02-05-1972 | CA DE FR GB NL | 922013 2132033 2096795 1348401 7108997 | A1 A5 A | 27-02-1973 13-01-1972 25-02-1972 20-03-1974 31-12-1971 | ٠. |
| US | 4725990 | Α | 16-02-1988 | NONE | | | | • |
| US | 6041282 | Α | 21-03-2000 | NO GB | 972635 2327756 | | 10-12-1998 03-02-1999 | |
| US | 6021091 | Ą | 01-02-2000 | NONE | | | | |
| US | 4491939 | A | 01-01-1985 | WO AU CA DE DK EP JP JP | 8300564 554704 1195396 3271889 161483 0085072 4057992 58501289 | B2 A1 D1 A ,B, A1 B | 17-02-1983 28-08-1986 15-10-1985 07-08-1986 13-04-1983 10-08-1983 16-09-1992 04-08-1983 | |
| US | 6108267 | Α | 22-08-2000 | US | 5883857 | Α | 16-03-1999 | |
| US | 4821241 | A | 11-04-1989 | NONE | | | | |
| US | 5943293 | Α | 24-08-1999 | NONE | | | | |
| US | 6188646 | B1 | 13-02-2001 | NONE | | | | |
| US | 6477111 | B1 | 05-11-2002 | AU BR CA CN DE EP WO ID NO | 762817 6357699 9915196 2346666 1324451 69913723 1123518 0026695 29481 20012146 | A A1 T D1 A1 A1 A | 03-07-2003 22-05-2000 07-08-2001 11-05-2000 28-11-2001 29-01-2004 16-08-2001 11-05-2000 30-08-2001 27-06-2001 | |